THERMIONIC ELECTRIC CONVERTER

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FIELD OF THE INVENTION

The present invention relates generally to the field of converting heat energy directly to electrical energy. More particularly, a thermionic electric converter is provided.

BACKGROUND OF THE INVENTION

Heretofore, there have been known thermionic converters such as those shown in U.S. Pat. Nos. 3,519,854, 3,328,611, 4,303,845, 4,323,808, 5,459,367, 5,780,954 and 5,942,834 (all to the inventor of the present invention and all hereby incorporated by reference), which disclose various apparatus and methods for the direct conversion of thermal energy to electrical energy. In U.S. Pat. No. 3,519,854, there is described a converter using Hall effect techniques as the output current collection means. The '854 patent teaches use of a stream of electrons boiled off of an emissive cathode surface as the source of electrons. The electrons are accelerated toward an anode positioned beyond the Hall effect transducer. The anode of the '854 patent is a simple metallic plate, which has a heavily static charged member circling the plate and insulated from it.

U.S. Pat. No. 3,328,611 discloses a spherically configured thermionic converter, wherein a spherical emissive cathode is supplied with heat, thereby emitting electrons to a concentrically positioned, spherical anode under the influence of a control member, the spherical anode having a high positive